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An

Inaugural Essay  
On ulceration of the Intestines

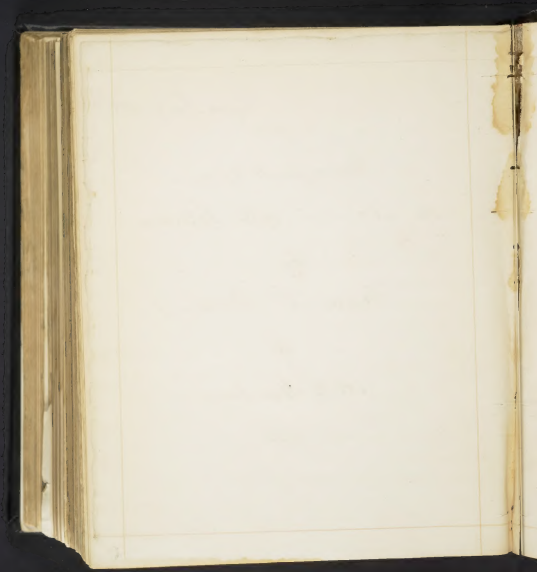
By

George S. Betts,

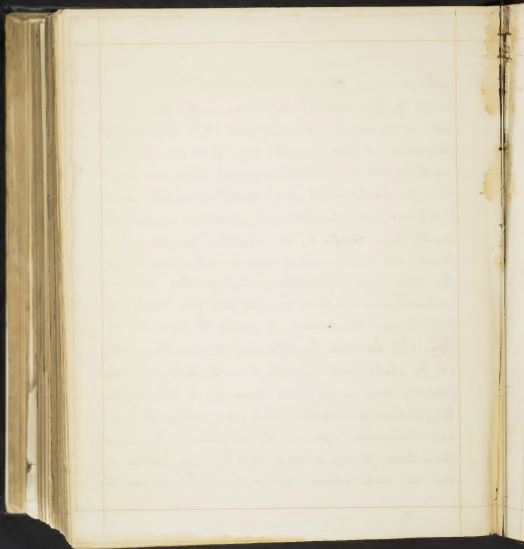
of

North Carolina.

1828.



Aspiring as the times may be to the advancement of the medical profession in this country, still it must be acknowledged, that there are difficulties, yet placed in the way of its success. The pathological investigations which have recently, been conducted, with such spirit, and which have conferred such benefit, upon Medical Science, have mostly been confined, to another quarter, and we have been contented, to receive and acknowledge the discoveries and observations of others. That very valuable contributions however, have been made to the profession in this country, it would be injustice to deny. But few and limited, are the facilities, allowed for Autopsical investigations, by the light of which Obscurity, may in a great measure, be removed from the practice of medicine, and the fallacy of incorrect, theoretical opinions be detected. The general prejudices of Society, and that delicacy which is natural, and almost invincible, to every one, in



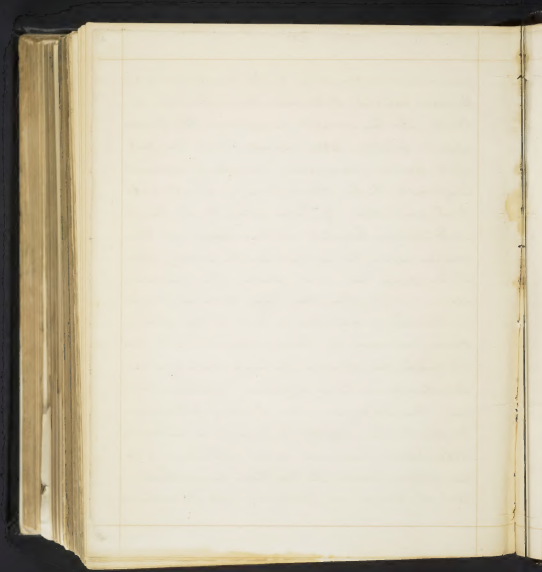
regard to the pursuits of morbid anatomy, has obstructed the progress of pathological discovery in this Country, where an ample Theatre, has been afforded, not only for the variety of disease, but the same diseases, modified by diversity of Situation and Climate.

The Stomach, having been long, looked upon as the principal organ, that is liable to suffer, by the ravages of fever and a variety of other diseases; it has been but lately, that investigations, more ample and extended, have illustrated, the importance of attending to the whole, alimentary Canal, as equally deserving of notice.

The truth of this proposition, has recently been set in a most interesting light, by the investigations of M. Broussais, a distinguished Physician of Paris. Having observed that the small glands of Peyer and Brunner, which are scattered, respectively along the course of the small and large intestines, are often liable to inflame.



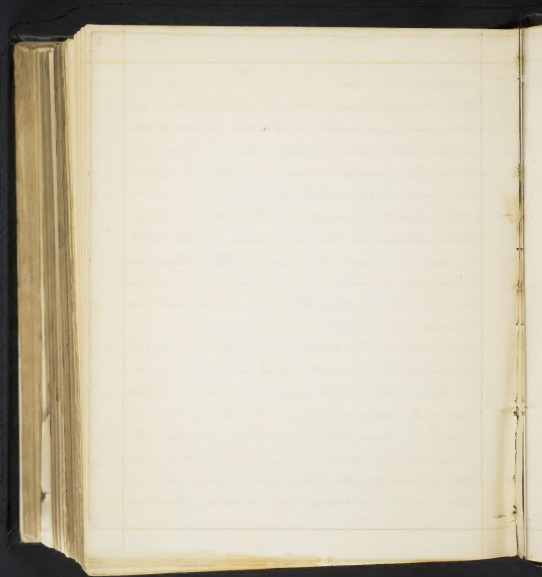
motion and ulcerations, he has constituted a new  
 disease, entitled dothine enteritis, a pustular en-  
 teritis. He has insisted much, upon the frequen-  
 cy and fatality of this disease, and the fact  
 of its actual occurrence, was shortly afterwards  
 confirmed, by the observations of Trivillot, An-  
 dral, and others of Paris, and by Dr Hewitt  
 of St George's Hospital. Nothing has, as yet been  
 written upon this subject, in this country, where  
 it has never been said, whether this disease  
 occurs or not. This may have resulted from can-  
 so previously adverted to: but in the Alms  
 House Infirmary of Philadelphia, where the great-  
 est facility is allowed for such investigations,  
 opportunity has been afforded, of seeing, not  
 only this, but every other form of ulceration  
 to which the intestinal canal is subject.  
 Ulceration generally of the intestines, is by  
 no means new. It has been long known  
 that it occurs in Variola, and its existence





in Chronic diarrhoea and dysentery, as well as in the colliquative diarrhoea of Phthisis, might have been readily suspected. But, in regard, to other diseases and especially, fever, that it begins now to lay the greatest claim to notice. So sceptical are many, as respects the existence of ulcerations of the intestines, except in the ordinary cases, above alluded to, that they have doubted whether they ever occur, or supposed, that glassen would be necessary to detect them. It is hardly important to state, how unfounded, and discreditable such opinions are.

In treating of this subject, it might be thought conducive to a suitable and lucid arrangement to describe the various Claps, into which ulceration of the intestines, might be distributed. There might be numerous, considering, whether, the glands of Peyer and Brunner, alone were affected; or whether the ulcer were superficial or deep seated, involving one or more coats and



presenting various aspects, as to their surfaces and edges. All portions of the intestine, are not equally liable to ulceration, as it has been computed that they occur most, in the following order as to frequency. The caecum - end of ileum; end of colon; commencement of rectum; Stomach; duodenum; jejunum; and arch of colon. The rectum from its being liable to fistulas, hemorrhoids, cancer, Contractions &c. might form a distinct class. Gendreau in his Anatomical, and pathological history of inflammation has adopted a simple division into three classes. 1<sup>st</sup> the villous, Confined to the Villi of the Mucous coat. 2<sup>d</sup> Follicular, Confined to the Mucous follicles. 3<sup>d</sup> The patched or laminated, which would embrace in some instances both the first. If to these is added, the pustular, or dothinoenteritis they would be sufficiently comprehensive. But it is of less importance to describe the classes of the ulcers, than to point out the causes in



when they occur. This must be done however, since the disadvantage that the Irish author paper would not allow, is a very minute detail of the history treatment and symptoms, of each case.

Case 1.

Eliza Gilman age 22 years an Irish emigrant admitted into the Women Medical Board Oct 3rd 1854 had been sick for nine weeks, and had been treated upon the active discharging plan with Safflower and castor. Symptoms on admission, great prostration, feeble pulse, tender epigastrium excited brain, Stimuli were used. Blisters to Head &c but delirium increased and convulsions supervening, died Oct 6th about 11 a.m. Thence places and spots of brain injected. Stomach effused under crachnoid Membrane - Lungs, Liver, and Vesae portarum Congested. Heart & Spleen Natural. Stomach and Liver glands contracted. Some dark spots about its Muscular tissue. The latter softened at large extremity.



7.  
Septum inserted externally, internally healthy. The whole of small intestine inserted externally, as well as that portion of the mesentery attaching the lower lower part of ileum. Had dark spots on it, ventral and muscular coat corresponding to them internally, were seen in the meso. coat. Generally of an oblong shape: some very large: the edges hard and shagreened, ragged and excavated centers. The meso. membrane around being intensely injected. There were some bulbous tuberculous elevations with ulcerations just commencing in the center, as if a point. The strands of the mesentery some in a state of simple granulation and all generally diseased.

### Case II.

James Clark admitted into the Blackwell Medical ward, about Jan<sup>y</sup> 1<sup>st</sup> 1827. 61<sup>st</sup> years - Previous history and local morbid not known. On admission tongue slightly fissured; pulse 100 - loose stools;





eye injected but symptoms generally favorable, was  
 treated to epigastric and rectal bleed-  
 Nov. 16. Appeared entirely convalescent. Took cold  
 by independent exposure. Fever returned this day  
 and hot; tongue red and dry, became at last  
 dark and crusted; salivary tenderness; heav-  
 iness of shoulders and laborious respiration; heavy  
 stupor: died Nov. 21. with all the symptoms  
 of typhus fever.

Autopsy day after death. Stomach large extremely  
 congested. Mucous lower ileum and duodenum  
 natural, at greater curvature on the anterior  
 surface, albuminous flakes, some speckled could  
 be scraped off. Dispeeling the mucous coat, the  
 under surface exhibited no such appearance.  
 Liver enlarged, but of a natural structure. Upper  
 half of jejunum natural, on the lower part of  
 ileum, almost throughout, were streaks of inflam-  
 mation, especially on that part of mucous mem-  
 brane, next to the attachment of the Mesentery.



The inflammation existed principally in Strata  
of red, with some spots or dots, of effused blood  
Some but not very great Muscular injections, and  
some thickened elliptical laminae in the lower  
part of ileum, filled with black dots which oc-  
cupied the mucous follicles. In the large intes-  
tines the Mucous Membrane, appeared elevated  
in irregular hillocks; the tops of which were  
rough, fungiform, and of a whitish yellow  
color. Surrounding these elevations, were black  
and red patches running in Circumferential and  
oblique directions. There were besides, many  
distinct ulcers. The ulceration diminished in  
the ascending Colon, and was absent in the  
Caecum, where the black and red patches  
also prevailed, but of less intensity. The rec-  
tum and descending Colon were the worst.  
In dissecting the coats the peritoneal and  
Muscular coats were not involved in the  
disease, and in the intervals of the elevations



and also attended to the mucous membrane  
was healthy in colour and texture.

Remarks. These two Cases exhibit evidently  
the Character of *Stomatitis* as described  
to all Physicians and to Dr. Ferri. The ulcer  
also commencing in the gland: the inflamed  
areolae surrounding them: the gland in some  
instances destroyed, and the ulcerations advan-  
cing in the mucous membrane, the intervals  
between, being healthy in its appearance.

The whole of this description, was recorded with-  
out the knowledge of the Observations of those  
Gentlemen at the time. But it is not the  
glands only, that may prove the seat of ulcer-  
ation, in Cases similar to those described above.  
In the fatal terminations of fevers, ulceration  
especially of the Small intestines, and the ileo-  
caecal valve, have been noticed at the same  
House: where the glands, particularly, the  
mesenteric, have not been, at all affected.



The affection of these latter glands, indeed, has been attempted to be explained, by supposing an absorption to take place, of the purulent fluid of the ulcer, by the radicals of the Vena portarum; these veins transmitting the fluid to the ganglions of the Mesenteries, when they anastomose with them selves, and with the absorbent Vessels. Be this as it may, it is not consistent with the object of this paper, to enter upon investigations of this nature: intending only to record facts which may speak for themselves. And on this account we shall not venture to inquire whether all Brittonians, was justified in building upon Rothentery, a new theory of fever; or whether Dr Hewitt, was more correct in speaking of it, as occurring in idiopathic fever; without assigning it, as the cause of fever. Its existence is enough for the Practitioner to know, and is sufficient to convince us of the truth of the remark, which Dr Jackson, has often made in





visiting examinations, at the Almshouse, that  
 the local affection in fever, are as much  
 to be dreaded, as the fever itself. So true is this  
 in regard not only to fever, but Phthisis pulmonalis  
 likewise, that many Cases have occurred, where  
 Patients affected with fever, have died not of the fe-  
 ver, but of peritoneal inflammation, induced by ul-  
 ceration extending through the bowels. In other in-  
 stances, too, weeks, or perhaps months after the fever  
 has disappeared, Patients have died of the ulcer-  
 ation, which has been left to corrode the intestines,  
 inducing, diarrhoea, exhaustion, and death. The  
 same is true with respect to Phthisis pulmonalis,  
 when healthy portions of the lungs, have been left,  
 sufficient for the purpose of respiration; but the  
 energies of life have been exhausted by the  
 continued effects of gastro-intestinal irritation  
 and ulceration. Alluding above to the various  
 manners, in which, ulceration of the bowels occurs,  
 the following Case affords some illustration.



## Case III.

Sarah Warden, admitted into the Black Women  
 Medical Ward. Nov. 12, age 22 years. Habits inter-  
 perate. Early in the month had been exposed to  
 cold and wet which brought on fever attended  
 with shivering and anorexia. Continued to be  
 come worse and came into the ward at the  
 above time. Symptoms on admission: Violent head  
 ache; difficulty of breathing Cough. Pain around  
 navel: tender abdomen and epigastrium: Skin  
 dry and hot. Bowels very open: Pulse small fre-  
 quent, and tense. Ordered cups to the feet of  
 Pain: light diet: fermentation: mild astri-  
 gent anodynes &c. died on 16<sup>th</sup>

Autopsi. Liver much enlarged, harder than  
 natural. Stomach natural. Great slight injec-  
 tion at the lower extremity. The meso. coat &  
 lower half of ileum as well as of the ascend-  
 ing and descending Colon, exhibited the appear-  
 ance of having had their serosa sprinkled with sugar.



and in the midst of it in some places were found  
small cells. The Muscular Coat surrounded the vascular  
injection. In the rectum were the same appearances  
and patches exposed as above. On close examination  
the injection was seated in the Muscular Coat as  
the Muscular Coat could be removed entire: and in  
one place where the Membrane was thus removed  
ulceration was observed in the Muscular Coat.

Remarks... The lesson, & the lesson so conspicuous  
in this case, is what has often been observed, in  
cases of fever in this House: and has often led  
us to suspect the existence of inflammation  
which may proceed to disorganization: and  
the knowledge of this fact, has convinced us, of  
the utility of emitting early, to cooling & mildly  
immoderate injections into the Venæ, and to the use  
of leeches and mild & cooling pimentation to the  
abdomen and epigastrium; and to abstain  
as much as possible from the use of active  
purgatives which would defeat the object of this



treatment. As to ulceration existing in the muscular coat, it is not probable that it often occurs; and if in any extent, would soon embrace the cellular and mucous membranes. But it is possible for disorganization to commence its career in any of the coats of the intestine. There died a few weeks ago, a man of middle age, in the Allen Clinical Medical Ward, whose case it is necessary to detail at full length. He was admitted into the Allen House, from the Pennsylvania Hospital where he had been the subject of intermittent fever. The result of this was effusion and he died shortly after his admission into this house having been treated ineffectually with diuretics, &c. On examination, ulceration of the bowels was discovered accompanied with peritoneal inflammation. The Omentum was thickened, and indurated, and the intestines glued together by coagulable lymph which had been thrown out; and scattered thickly





over the peritoneal surface of the intestines, tubercles  
were observed many of which were in a state of sup-  
puration. There, had in many instances, extended in  
wards so far as to leave the mucous membrane entire  
although it exhibited along its back marks of chemo-  
sis irritation and inflammation. It would be easy  
were it essential, to detail other cases, similar to the  
last mentioned, in which persons attacked, at first  
with fever attended with diarrhoea and resulting  
at last in effusion were found after death to  
have ulceration of the intestines, seated in the  
mucous coat; not large, jagged, and sharp-edged  
like those observed in typhus fever but generally  
diminutive, a line or two in diameter, and  
circumscribed by well defined areolae of a  
red colour. The ulcers too, that may be so often  
observed in Chronic diarrhoea and dysentery,  
and in the Colliquative diarrhoea of phthisis,  
as well as, in the Cases which Richter has denom-  
inated, rheumatism inverted, before the bowels,



although the edges are often jagged, blackish,  
and deep: they do not present the elevated ap-  
pearance like the Venereal sore or chancre, as the  
ulcers previously described. The infants too, who  
have died, with all the ordinary symptoms of  
Hydrocephalus, such as swelling of the eyes: and of  
the head: toping of the hands: convulsions &c:  
ulceration of a peculiar Character, so far as I  
have had an opportunity of seeing, occurs, at-  
taching the Mucous follicles which have the  
appearance of black specks, enclosed in thick-  
ened elliptical laminae of the Mucous Mem-  
brane: these ellipses, beginning in the large  
intestines, and diminishing in their transverse  
or long diameter, as they advanced to the small  
intestines: becoming more indistinct in their  
Aspect, and scarcely visible in the duodenum.  
The Same Appearance has also been described  
in one of the Cases previously detailed Conjoined  
with ulceration and destruction of the Mucous



membrane, & to other kind of ulceration have I  
seen however, in the Tympanum of Children:  
and its occurrence is sufficient to indicate  
the utility of considering the Primæ viæ, as  
the principal seat of that disease.

A case of some interest with regard to another  
disease, it may be worth while to detail more  
at length.

Case IV.

Levis McGinnis age 26 years, admitted into  
the above Clinical Ward Sept. 26<sup>th</sup> 1827. Said  
he had been sick for some weeks. First with  
Anorexia, nausea, and head ache, After which  
his skin became jaundiced. Dyspepsia, or ad-  
mixture of a bright yellow or golden  
colour, conjunctivæ the same. Tongue white  
furred and cracked in every direction. Bowls  
open: feels no pain. Ordered Blue Mass and  
friction of Strong Mercurial ointment - diet  
to be light 24<sup>h</sup> cups to eight Hypochondrium



29<sup>th</sup> no better. Skin of a deeper colour and dry.  
 ordered Calomel and Opium in small quantities  
 30<sup>th</sup> 2<sup>nd</sup> Bomb. too much Opium's Strength general-  
 ly reduced. Tongue dry and Cracked: Voice Weak  
 and tremulous: ordered Cortacous julep with  
 Tize. Opium; and enemata of flax seed Mucilage  
 and Laudanum. 3<sup>rd</sup> Bomb. improved: but dis-  
 position to sink. Ordered blister to right side  
 P. M. sinking. Tongue the same, Mind wander-  
 ing. ordered Stimuli, internally, and exter-  
 nally. 4<sup>th</sup> Sinking Gradually. 5<sup>th</sup> Morning: died  
 or 7<sup>th</sup> Having ejected from the Stomach before  
 death three fourths of a pint of dark fluid re-  
 sembling Coffee grounds.

Autopsia. Liver of natural size. Bile natural.  
 no distinction of ducts, or apparent contraction  
 or inflammation of them. Stomach slightly in-  
 flamed at large extremity in one spot. But at an-  
 other surface the mucous lining appeared rather  
 thickened. no inflammation or redness of Stomach





but it was more of a yellow tinge. Intestines of a dark colour, externally. On opening the large intestines, they exhibited a bluish appearance and irregular dark red spots of apparently coagulated blood, in the mucous coat, with a kind of general effused lymph: the center of these dark spots being the seat of ulceration. This appearance existed especially towards the cecum.

Remarks It will be seen from the treatment pursued in this case that the liver was suspected to be materially concerned as the seat of this disease, which it was not. The appearance presented, afford a strong illustration of the truth of that pathology of jaundice, as taught by the professors of the practice of medicine at the University of Pennsylvania, describing it merely to a derangement of the chyliferous system in which the serum of the capillaries undergoes a morbid change.

In addition to the cases already cited the space



to which this paper must be confined will allow  
 of the detail of but one case and that with re-  
 spect to a disease whose title is indefinite and  
 its pathology obscure, a disease which the prac-  
 titioners are often unnecessarily inclined to  
 relieve.

#### Case V.

Ellis Grant Anderson, age 33 years, admitted into  
 the Western Clinical Medical Ward in the Spring  
 of 1827. Had been a very plethoric and healthy  
 man. Some time previously to admission, had been  
 seized with fever. On admission, account of the  
 case as follows. General excitation of whole  
 body: labile life; appetite. Soreness of the Mus-  
 cles of the extremities so as not to bear the slight-  
 est touch. Has been treated with active purgation  
 and emetics, much to his disadvantage. Has  
 had blister to breast for hemorrhage. Hemorrhage  
 still exists amounting almost to a hemorrhoid  
 ordered blisters to be repeated & anodyne expectorants



Speech in a few weeks, returned, strength of extremities soon relieved. Genus diet allowed, and Anodyne at Night. April 25<sup>th</sup> Pain at Stomach for which she was leeches, and black drop & Anodyne Misture ordered. May 20<sup>th</sup> Some paroxysms of pain in bowels, with tormina, which nothing could relieve. Lingered until June and died with all the symptoms which characterize Marasmus or Tabes Mesenterica. Dulcified Gum, Midange and other natural remedies enlarged stomach entirely, attended the left of the spine or left Hypochondrium. The spleen extremely hypertrophied and in contact with the diaphragm. The liver extremely enlarged, and in contact with the left side of the Spine; the duodenum lying perpendicularly back, in the spine. The rectum very extensive marks of ulceration. The Mucous Coat most thickened & not healed or cicatrized, and this appearance continued through the whole of



the colon but was much less in the caecum. In the rectum, and lower portion of ileum were observed some dark coloured tubercular thickenings of the mucous coat, and elevated laminae of the same, red, and florid, with well defined edges. The rest of the mucous surface, had the appearance of having been ulcerated and cicatrized. The small intestine, especially affected by chronic inflammation and having a granular aspect, as if flou, had been dusted over this surface. The glands of the mesentery some what enlarged.

Remarks. This Case will illustrate the effect of ulceration of the intestine and the time it may continue, as well as, the recuperative efforts which the system can make to relieve itself. It has been doubted, whether the mucous membrane, after being destroyed, by ulceration, could be healed, or regenerated. That it may be, is admitted by Trillat, Cuvier, Hewitt and





others, who have directed their attention to investigation of this nature. But a remark which is made by Horseship, in his treatise on the Corns, may shed some light on this, as well as similar cases. I have observed he remarks, that the new surface, when the ulcer have healed, is neither capable of absorbing, nor bearing irritation so well as the original structure.

As it respects the diagnosis and treatment of ulceration of the intestines it was not intended to dwell upon them further, than what is stated in the record of the case quoted.

I have thus endeavored to exhibit what was intended, the frequency of a disease which is not often suspected: illustrating the truth of that law of pathology, that again the most active, are most subject to disease. I do not suppose that, ulceration of the



intestines, always exist; in diseases similar to those, in which I have said, they have occurred. On the contrary they do not. But it behoves the enlightened Physician to be apprised of the danger, with which he has to contend, in order that he may if possible, avoid them, by a vigilant and patient investigation into the nature and seats of disease.

Baffled as we must often be, in conclusion with regard to disease within, drawn from signs without; it gives no reason to suppose, or believe, according to some, that little utility exists in investigating post mortem the causes of disease and death. On the contrary that being the surest method of determining a correct diagnosis and pathology, we should avidously appeal to it until greater certainty and security are obtained, in forming these opinions by



Which it is attempted to regulate the prac-  
tice of Medicines.

M. O.  
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